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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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27367	7590	08/29/2005	EXAMINER	
WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1600 - INTERNATIONAL CENTRE 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319				STARKS, WILBERT L
		ART UNIT		PAPER NUMBER
				2129

DATE MAILED: 08/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/057,294	LUND, RICHARD A.
	Examiner	Art Unit
	Wilbert L. Starks, Jr.	2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 June 2005.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-51 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-51 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Rejections - 35 U.S.C. §101

1. 35 U.S.C. §101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the invention as disclosed in claims 1-51 is directed to non-statutory subject matter.

2. Regardless of whether any of the claims are in the technological arts, none of them is limited to practical applications in the technological arts. Examiner finds that In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in AT&T Corp. v. Excel Communications, Inc., 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of:

...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. AT&T v. Excel at 1453 quoting In re Warmerdam, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicant's "selected output" references are just such abstract ideas.

3. Examiner bases his position upon guidance provided by the Federal Circuit in In re Warmerdam, as interpreted by AT&T v. Excel. This set of precedents is within the

same line of cases as the Alappat-State Street Bank decisions and is in complete agreement with those decisions. Warmerdam is consistent with State Street's holding that:

Today we hold that *the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result' -- a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.* (emphasis added) State Street Bank at 1601.

4. True enough, that case later eliminated the "business method exception" in order to show that business methods were not *per se* nonstatutory, but the court clearly *did not* go so far as to make business methods *per se* statutory. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were *per se* statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."

5. The court was being very specific.

6. Additionally, the court was also careful to specify that the "useful, concrete and tangible result" it found was "a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." (i.e. the trading activity is the further practical use of the real world

monetary data beyond the transformation in the computer – i.e., “post-processing activity”.)

7. Applicant cites no such specific results to define a useful, concrete and tangible result. Neither does Applicant specify the associated practical application with the kind of specificity the Federal Circuit used.

8. Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

...[T]he dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating ‘abstract ideas’ or ‘natural phenomena’ ... As the Supreme Court has made clear, [a]n idea of itself is not patentable, ... taking several abstract ideas and manipulating them together adds nothing to the basic equation. *In re Warmerdam* 31 USPQ2d at 1759 (emphasis added).

9. Since the Federal Circuit held in *Warmerdam* that this is the “dispositive issue” when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is “useful, concrete, and tangible” in similar cases. Accordingly, the Examiner finds that Applicant manipulated a set of abstract “selected output” to solve purely algorithmic problems in the abstract (i.e., what *kind* of “selected output” is used? Algebraic word problems? Boolean logic problems? Fuzzy logic algorithms? Probabilistic word problems? Philosophical ideas? Even vague expressions, about which even reasonable persons could differ as to their meaning? Combinations thereof?) Clearly, a claim for manipulation of “selections for the output” is provably even more abstract (and thereby less limited in practical application) than pure “mathematical algorithms” which the Supreme Court has held are per se nonstatutory – in fact, it *includes* the expression of nonstatutory mathematical algorithms.

10. Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.

11. Since Warmerdam is within the Alappat-State Street Bank line of cases, it takes the same view of "useful, concrete, and tangible" the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a "useful, concrete and tangible result". There is only manipulation of abstract ideas.

12. The Federal Circuit validated the use of Warmerdam in its more recent AT&T Corp. v. Excel Communications, Inc. decision. The Court reminded us that:

Finally, the decision in *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) is not to the contrary. *** The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that 'taking several abstract ideas and manipulating them together adds nothing to the basic equation'; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court's conclusion on the facts, the holding of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

13. Remember that in In re Warmerdam, the Court said that this was the dispositive issue to be considered. In the *AT&T* decision cited above, the Court reaffirms that this is the issue for assessing the "useful, concrete, and tangible" nature of a set of claims under 101 doctrine. Accordingly, Examiner views the Warmerdam holding as the dispositive issue in this analogous case.

14. The fact that the invention is merely the manipulation of *abstract ideas* is clear. The data referred to by Applicant's phrase "selected output" is simply an abstract construct that does not limit the claims to the transformation of real world data (such as monetary data or heart rhythm data) by some disclosed process. Consequently, the necessary conclusion under AT&T, State Street and Warmerdam, is straightforward and

clear. The claims take several abstract ideas (i.e., "selected output" in the abstract) and manipulate them together adding nothing to the basic equation. Claims 1-51 are, thereby, rejected under 35 U.S.C. §101.

Claim Rejections - 35 U.S.C. §112

The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-51 are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how to practice the undisclosed practical application*. This is how the MPEP puts it:

("The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. §101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. §101, then the application also fails as a matter of law to enable one of ordinary skill in the art to use the invention under 35 U.S.C. §112."); In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) ("Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, otherwise an applicant would anomalously be required to teach how to use a useless invention.") See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-51 are rejected on this basis.

Response to Arguments

1. Applicant's arguments filed 06/09/2005 have been fully considered but they are not persuasive. Specifically, Applicant makes the following arguments:

- A. The claimed invention falls within the safe harbor provision commonly known in 35 U.S.C. §101 doctrine as "precomputer activity."
- B. The claimed invention falls within the safe harbor provision commonly known in 35 U.S.C. §101 doctrine as "postcomputer activity."
- C. Since the 35 U.S.C. §101 have been overcome, the 35 U.S.C. §112, 1st paragraph rejections are overcome as well.

Examiner disagrees and will address each argument in turn:

Argument A

As evidence of "precomputer activity," Applicant presents the asserted facts that:

- i. Claims 1, 24, and 47 "relate to control of a physical system" (emphasis added.)
- ii. Claims 1, 24, and 47 recite the step of "controlling the physical system as a function of checking a quality of identity of a virtual identity system."

Regarding asserted fact "i" above, Applicant has not specified what "relate to..." really means. "Relating to" the control of a physical system is not necessarily limited to effecting control of a physical system...it can be a mere calculation that relates to some control yet to be effected.

Regarding asserted fact "ii" above, checking the quality of identity of a virtual identity system is purely a mathematical process. A "virtual identity system" is an unspecified model of an unspecified system. Checking the quality of the model does not necessitate any post computer activity to be effected...it does not even require the display of the result of the checking process, much less its actual use in a practical application outside of the computer. It is simply an abstract control strategy that does not specify what physical parameters are being controlled.

Is Applicant's control parameter the position of a radar dish? Is it the paper speed in a printer? Is it the rate of wrapping bubble gum in a manufacturing apparatus? Is it voltage? Is it fluid level? Is it temperature? Is it light intensity? Is it gas pressure?

Applicant has not specified any limitations to one of these or any other practical applications. Carefully note that each of the possible practical applications listed above is a different invention within the scope of Applicant's claims.

Applicant is permitted to apply for and to hold patents for individual inventions, but is not permitted to hold patents for the underlying algorithms for entire fields of invention. Applicant's claim for "control of a physical system" is merely a limitation to what is called a "field of use" within which there is an innumerable plethora of different

unspecified inventions. In §101 doctrine, mere limitation to a "field of use" is not a sufficient ground upon which to find that a claim is statutory.

On these bases, Examiner maintains that Applicant's claims violate 35 U.S.C. §101 and the rejections are not withdrawn in response to Applicant's first argument.

Argument B

As evidence of "precomputer activity," Applicant presents the asserted facts that:

- i. Claims 1, 24, and 47 "utilize an actual output of physical activity, i.e., responses of a system to various drive inputs."
- ii. Claims 1, 24, and 47 contain a "transformation" where "the quality of identity is checked using the actual output."

Regarding asserted fact "i" above, Applicant has not claimed the use of any sensed variables and has not specified any real-world variables other than to say that the variables are in the real-world (i.e., the "output of physical activity.")

Again, Applicant has not presented a limitation that limits an input variable to a practical application. The "output of physical activity" Applicant discusses could be sonar data, radar data, spring compression data from a motorized pogo stick, position data for an automatic hat tipper, etc. Each of these things is a different invention that is within the scope of the claims.

Applicant has not specified any limitations to one of these or any other practical applications. Carefully note that each of the possible practical applications listed above is a different invention within the scope of Applicant's claims.

Applicant is permitted to apply for and to hold patents for individual inventions, but is not permitted to hold patents for the underlying algorithms for entire fields of invention. Applicant's assertion of a claim for "an actual output of physical activity" is merely a limitation to what is called a "field of use" within which there is an innumerable plethora of different unspecified inventions. In §101 doctrine, mere limitation to a "field of use" is not a sufficient ground upon which to find that a claim is statutory.

Regarding asserted fact "ii" above, In re Warmerdam applies:

...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. AT&T v. Excel at 1453 quoting In re Warmerdam, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Applicant asserts that there is a "transformation," but Applicant has not presented limitations to any practical applications, so Applicant is "transforming" or "manipulating" an abstract input that could be the speed of paper in a printer, angle data from an automatic hat tipper, or whatever. Taking an input so abstract and "manipulating" it (or "transforming" it) adds nothing to the basic equation. The associated claims are abstract from practical applications and remain nonstatutory under In re Warmerdam.

On these bases, Examiner maintains that Applicant's claims violate 35 U.S.C. §101 and the rejections are not withdrawn in response to Applicant's second argument.

Further, the original basis for Examiner's rejection is found in In re Warmerdam.

Applicant has not addressed Examiner's specific application of this law to the facts in this case. Accordingly, Applicant has not shifted his burden of proof on this particular point.

Therefore, the rejections of the claims under Warmerdam STAND as proper.

Argument C

Since the 35 U.S.C. §101 stand as proper, the underlying basis for the 35 U.S.C. §112, 1st paragraph rejection remains and the §112, 1st rejections also STAND as proper.

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (571) 272-3691.

Alternatively, inquiries may be directed to the following:

S. P. E. Anthony Knight **(571) 272-3687**

Official (FAX) (571) 273-8300

WLS

17 August 2005

Wilbert L. Starks, Jr.
Wilbert L. Starks, Jr.
Primary Examiner
Art Unit - 2121